CLAIMS:

1. A method for encoding N input signals, with N>2, said method comprising the steps of:
- generating from the N input signals a composition of M signals, with N>M≥2,
- encoding the composition of M signals into coded data,
- encoding a selection of N-M out of the N input signals into coded data,

wherein the composition of M signals is orthogonalized prior to encoding.

2. A method according to claim 1, wherein the orthogonalizing is done by switching between sum/difference coding and independent coding.

3. A method according to claim 1 or 2, wherein a control signal is included in the coded data to indicate to the decoder how the orthogonalizing has been performed.

4. A method according to any of the claims 1 to 3, wherein the composition of M signals is coded into a first bit-stream, and the selection of N-M signals is coded into a second bit-stream.

5. A method according to any of the claims 1 to 4, wherein M=2.

6. A method according to any one of the claims 1-5, wherein the N input signals are transformed to a frequency domain prior to encoding.

7. A method according to any one of the claims 1-6, wherein the orthogonalization is performed per frequency band.

8. A method for decoding coded data representative of N signals, the coded data comprising a composition of M signals and a set of N-M signals, with N>M≥2, and wherein said composition of M signals is orthogonalized, the method for decoding comprising:

- decoding the coded data to obtain the composition of M signals and the set of N-M signals,
- generating a set of N output signals from the composition of M signals and the set of N-M signals,

wherein the composition of M signals is de-orthogonalized prior to the generation of N output signals.

9. A method for decoding as claimed in claim 8, wherein the de-orthogonalizing is done by switching between sum/difference decoding and independent decoding.

10. Apparatus for encoding N input signals, with N>2, said apparatus comprising means for:

- generating from the N input signals a composition of M signals, with $N>M \geq 2$,
- encoding the composition of M signals into coded data,
- encoding a selection of N-M out of the N input signals into coded data,
- orthogonalizing the composition of M signals prior to encoding.

11. An apparatus for decoding coded data representative of N signals, the coded data comprising a composition of M signals and a set of N-M signals, with $N>M \geq 2$, and wherein said composition of M signals is orthogonalized, the apparatus for decoding comprising:

- decoding the coded data to obtain the composition of M signals and the set of N-M signals,
- generating a set of N output signals from the composition of M signals and the set of N-M signals,

wherein the composition of M signals is de-orthogonalized prior to the generation of N output signals.

12. A signal format for use in transmitting coded data representative of N signals, the coded data comprising a composition of M signals and a set of N-M signals, with $N>M \geq 2$, and wherein said composition of M signals is orthogonalized.

13. A signal format as claimed in claim 12, wherein a control signal is included in the coded data to indicate to the decoder how the orthogonalizing has been performed.

14. A record carrier on which a signal format as claimed in claim 12 or 13 has been stored.